

FIGURE 4
(PRIOR ART)

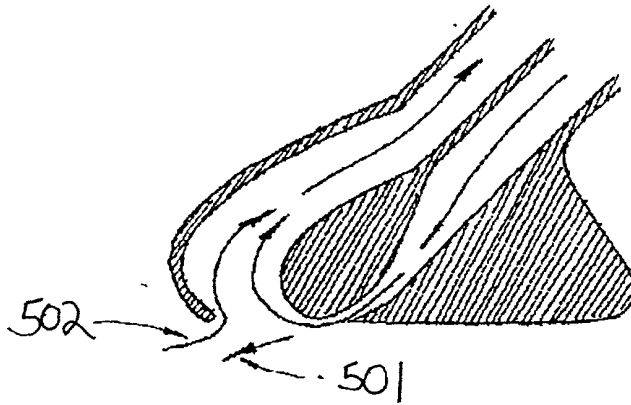


FIGURE 5
(PRIOR ART)

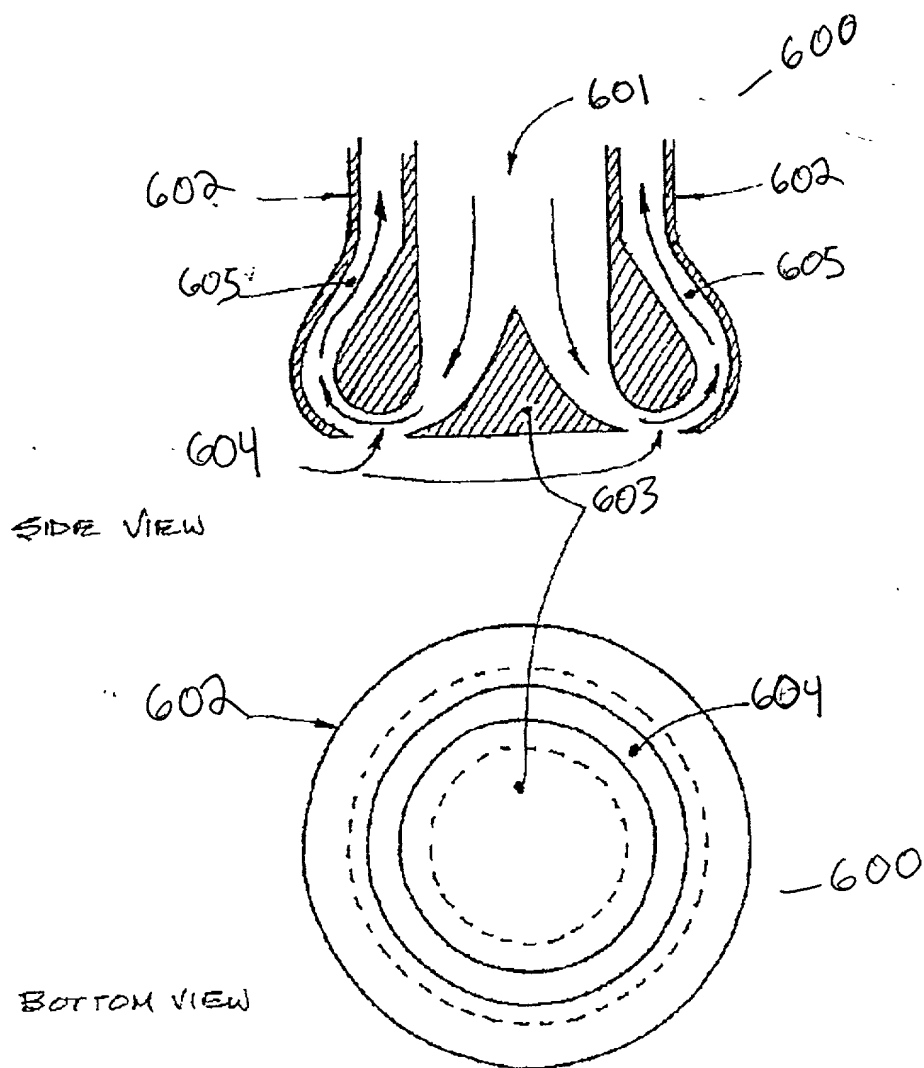


FIGURE 6.
(PRIOR ART)

10025376-11494
10677-9452007

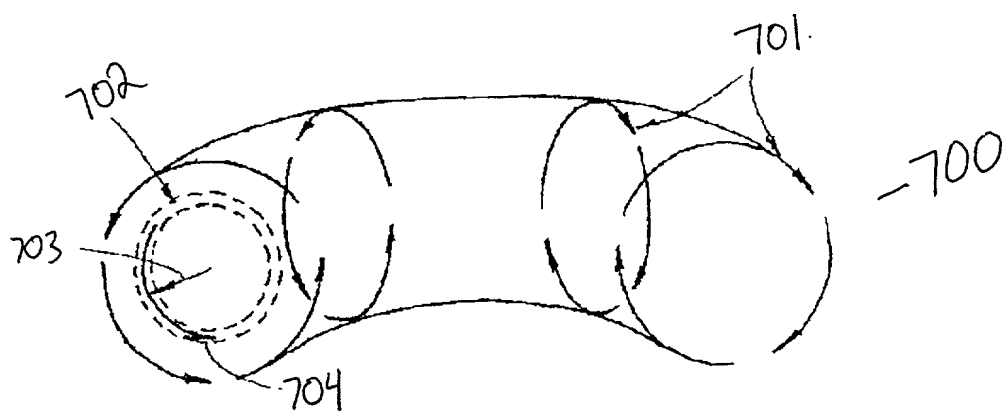


FIGURE 7.

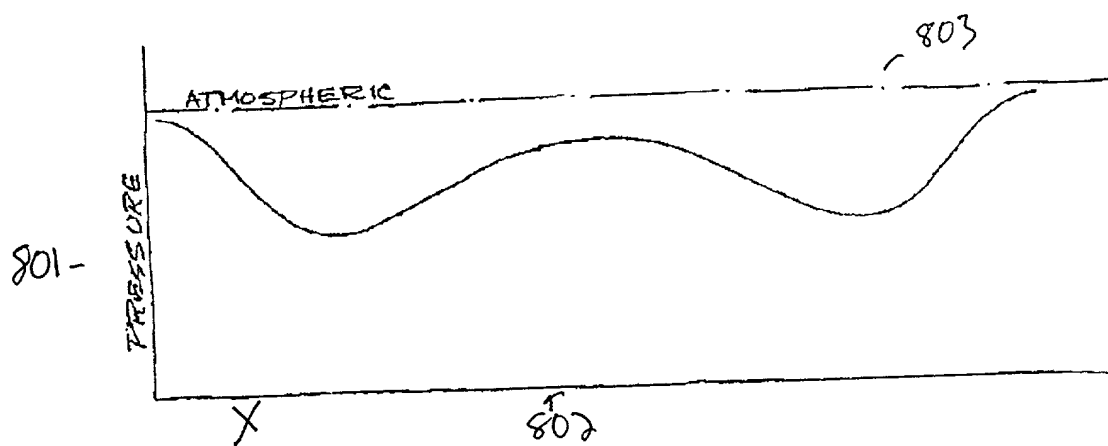


FIGURE 8.

FIG. 9

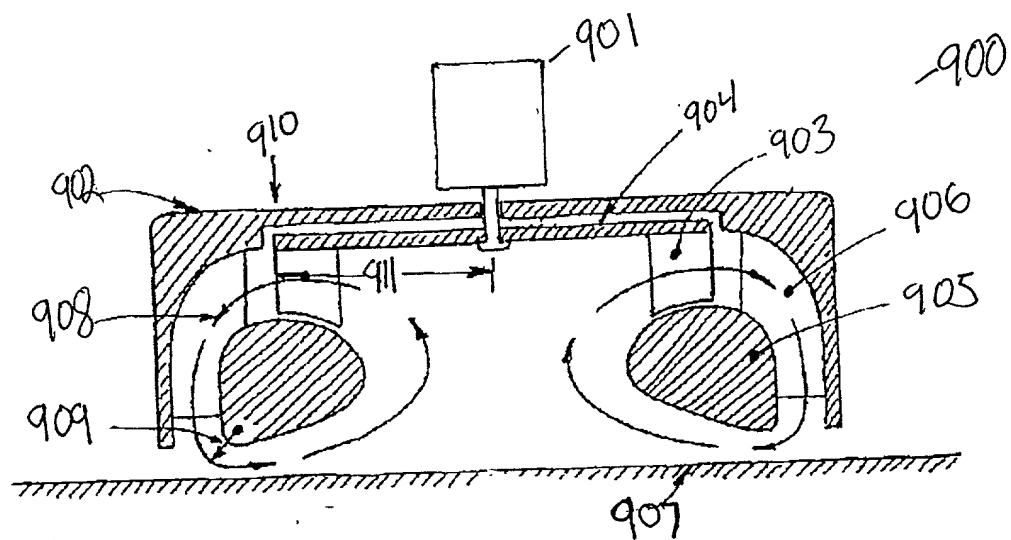


FIGURE 9.

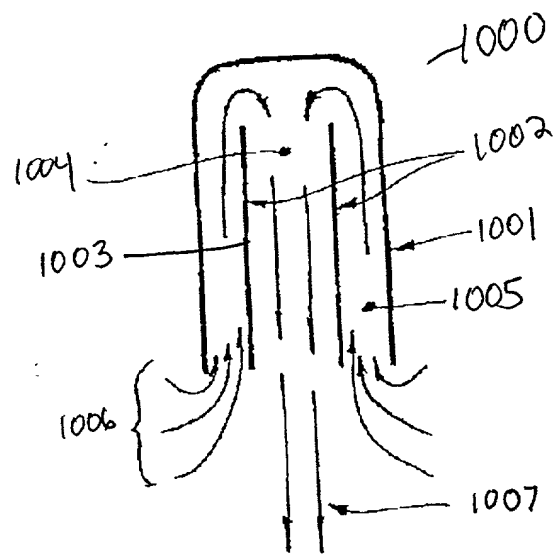


FIGURE 10.

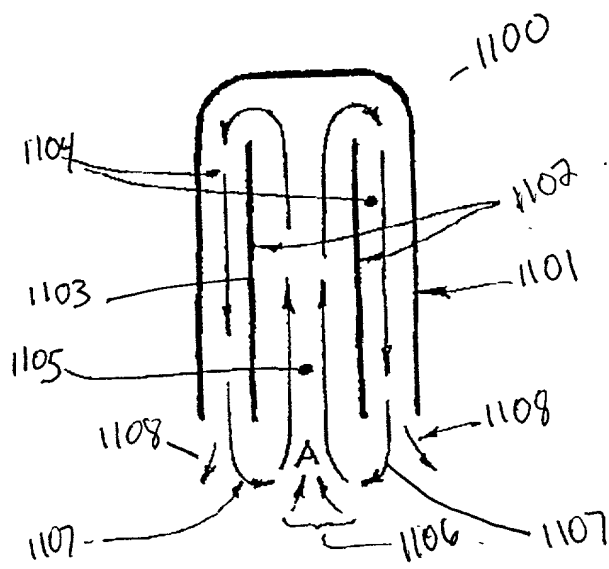


FIGURE 11.

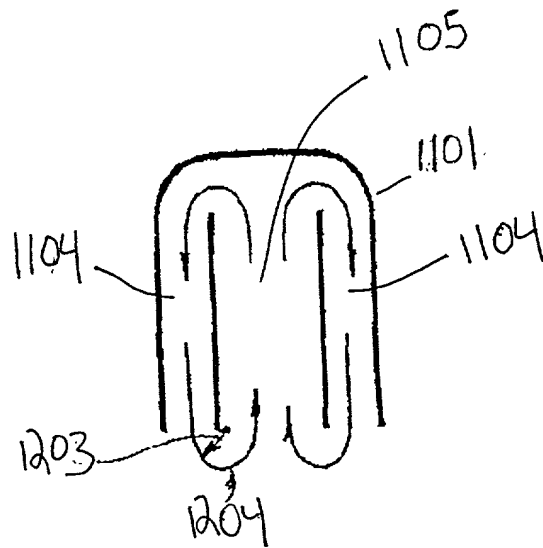


FIGURE 12.

FIG. 13

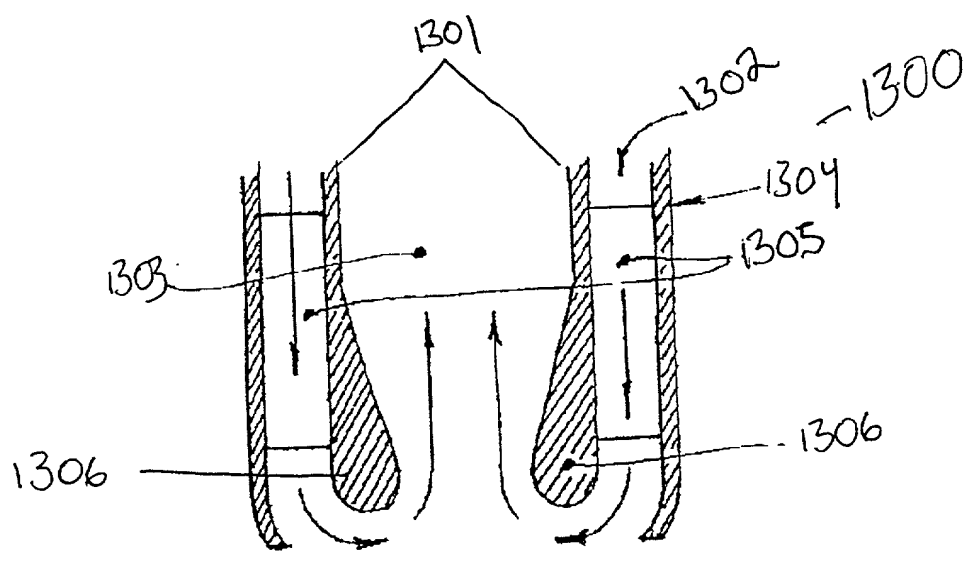


FIGURE 13.

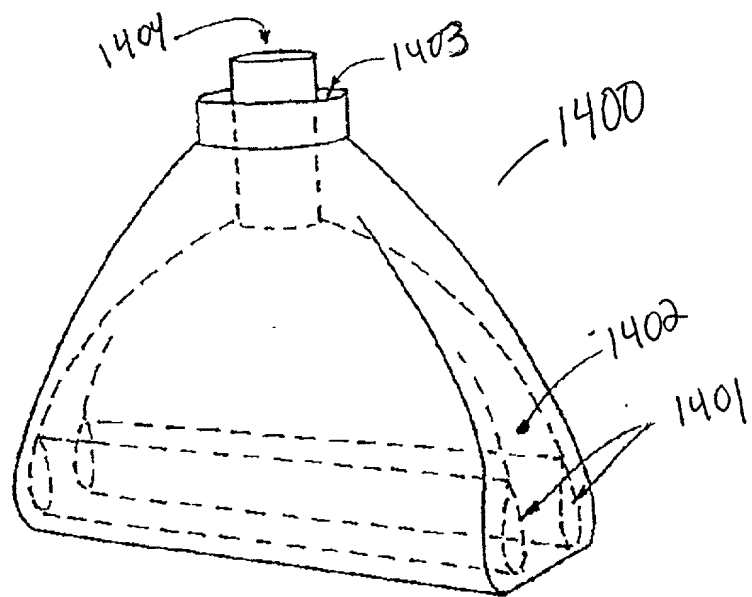


FIGURE 14.

FIGURE 15.

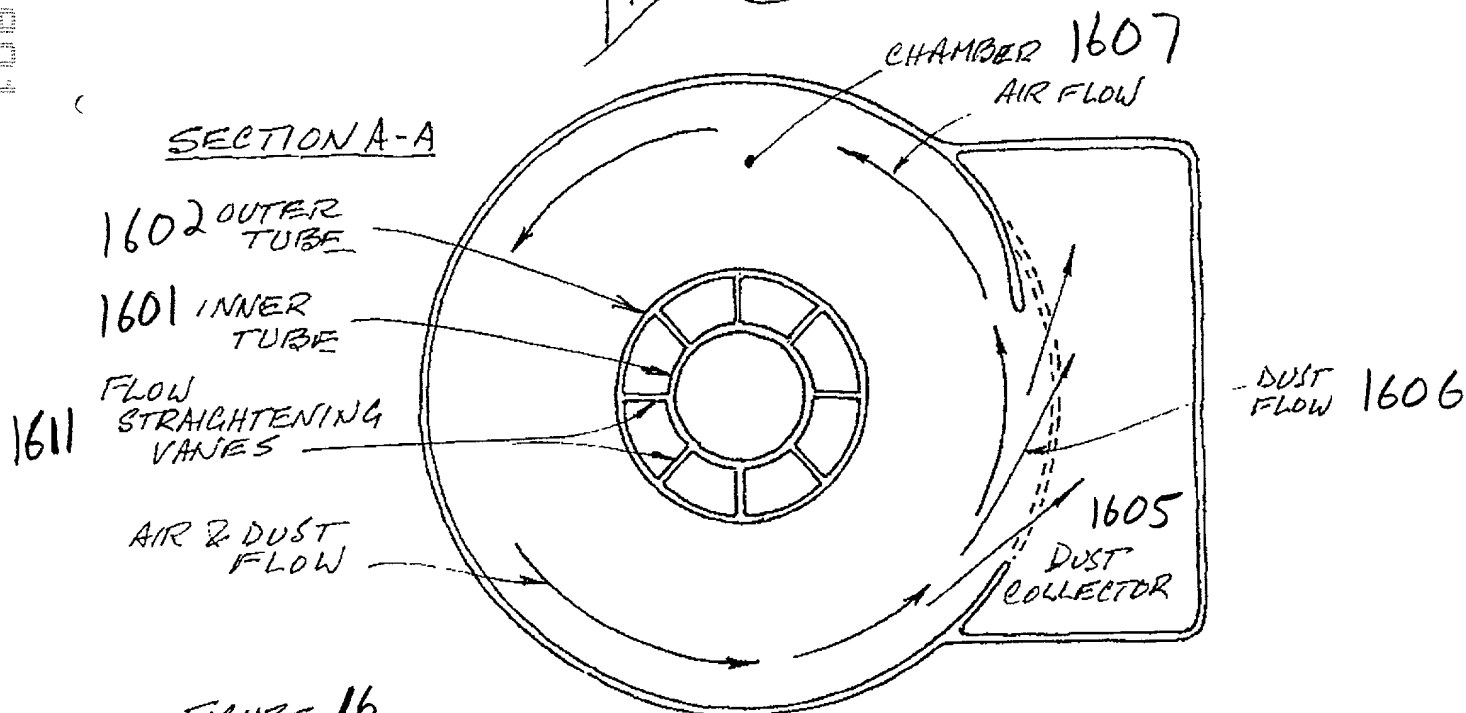
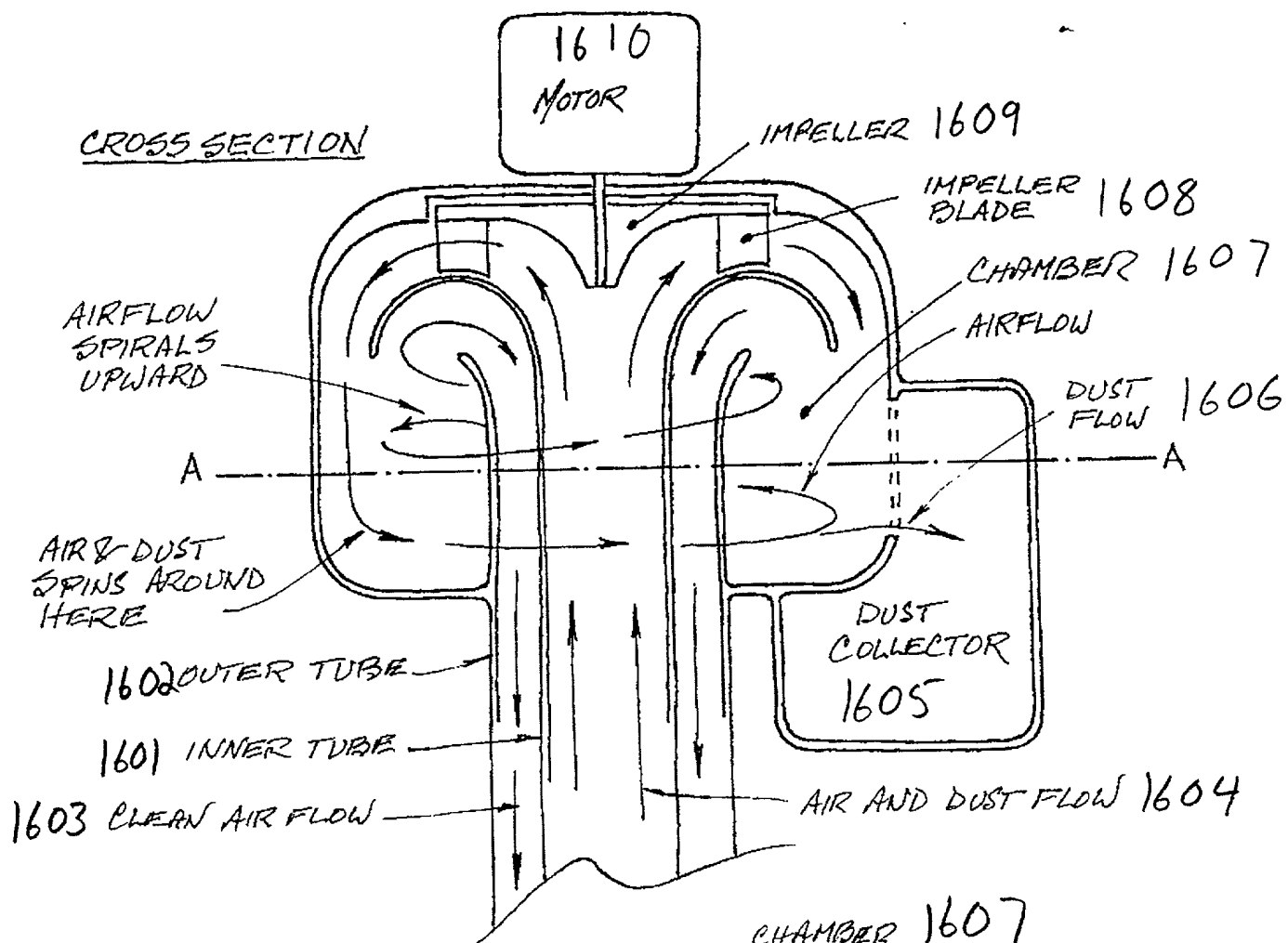


FIGURE 16

TOROIDAL VORTEX VACUUM CLEANER
CENTRIFUGAL DUST SEPARATOR

Wingworth
 11 Sept 01